Sustainment

Army Future Force units in 2020, as part of a Joint, Interagency and Multi-national team, *see first*, *understand first*, *act first, and finish decisively* to dominate future land operations and provide the decisive complement to air, sea and space operations at the strategic, operational, and tactical levels. Mission success in 2020 requires the capability to quickly adapt to difficult and high-risk challenges in a decidedly different and dynamic operational environment. In this new environment, overwhelming power, speed, and information dominance, at the time and point of engagement, is more important than overwhelming force. It is within these strategic, operational, and tactical frameworks that the Army logistics community continues to provide requisite sustainment capability in 2020.

The Army, by transforming its sustainment systems, processes and organizations is enabled to be predictive and responsive to the operational requirements of the maneuver and Combatant Commander. This transformed sustainment system is optimized for major combat operations in Joint, International and Multinational settings, and fully capable across the full spectrum of combat operations, providing options for the Combatant Commander. Sustainment forces, like combat arms units, are characterized by robust, reliable, interoperable, and organically embedded connectivity and linkages, both satellite and ground-based, that enable them to see assets throughout the distribution pipeline and transmit and use data and information to respond to the warfighters operational requirements. Army sustainment organizations are organized and resourced to perform executive agency for common user logistics as required by DoD or the Combatant Commander.

The Transformation of Army Sustainment was guided by three overarching goals: enhance strategic mobility and deployability, reduce the deployed sustainment footprint and replenishment demand; and reduce the cost of logistics while maintaining warfighting capability and readiness. By achieving these goals, transformed sustainment organizations and processes have freed maneuver commanders from lengthy and exposed lines of communication, unburdened them from large stocks of supplies, and relieved them of the necessity to conduct time-consuming and extensive resupply operations.

Army Sustainment transformation is nested in the Defense Transformation Planning Guidance, the DoD Future Logistics Enterprise, the Joint Vision and the Joint Operations and Functional Concepts. The four capstone concepts that continue to guide specific plans, programs, and process improvements to transform the Strategic and Maneuver Sustainment systems are:

- Joint Logistics Corporate Enterprise (JLCE)
- Distribution Based Logistics (DBL)
- Performance Based Logistics (PBL)
- Demand Reduction

The JLCE is the sustainment component of the Army Knowledge Enterprise Architecture. It is characterized by a common logistics-operating environment seamlessly integrated into the Common Operating Picture (COP). This architecture provides a framework for vertical and horizontal integration from fort and factory to foxhole, and space to mud. The JLCE specifies interfaces and relationships internal to the Army and externally to suppliers and users in the Joint, Interagency, and Multi-national environment. The Enterprise depends upon improved tactical and strategic automation systems and processes which are interoperable with joint, interagency, and commercial architectures by design. The "infostructure" supporting JLCE is robust enough to allow logisticians to see requirements in near real time. Adaptive and responsive to joint warfighter demands and providing visibility to both operational and sustainment requirements, the JLCE increases the joint force commander's combat capabilities, increases his confidence in sustainment and frees him from routine sustainment decisions and concerns. Moreover, the enterprise shapes how future logisticians conceive, design, develop and sustain new systems as the Army continues to transform.

With the information available from the JLCE, logisticians are able to accurately predict impending sustainment needs; precisely requisition appropriate stocks; reliably forecast delivery; and assure delivery on time and at the right location and within the battle rhythm of the warfighter. Confident in the logistician's ability to sense and respond to his sustainment needs, the operational commander need no longer insist upon mountains of "just in case" stocks, divesting his units of excess spares and other supplies, thereby exponentially increasing their operational and tactical mobility. Informed by the JLCE, the COP provides logisticians' access to all required operational information detailing enemy and friendly situations in real time. This enables the planning and conduct of sustainment operations based on self-contained task-organized cohesive packages, with embedded force protection, and integrated into the maneuver commander's scheme of operations. The result is responsive, accurate, and focused delivery of resupply and sustainment stocks and support to the tactical unit in just the right amounts, at just the right time, and in just the right location; avoiding or overcoming enemy interference and freeing the tactical unit being resupplied with any requirement to conduct extensive preparation or to continuously secure lines of communication.

The leveraging of information technology and modular sustainment organizations provides operational flexibility and agility to the maneuver commander which translates into significant strategic deployability and operational mobility enabling greater expeditionary responsiveness and mission versatility further adding capability to the joint force commander.

Distribution Based Logistics (DBL) is the centrally managed, Joint, end-to-end fusion of supply, transportation and information functions to speed delivery and reduce the size of the deployed footprint by maximizing throughput and increasing velocity. DBL dramatically reduces customer wait time, significantly improves time-definite delivery, permits robust reductions in on-hand stockage levels, and greatly improves user trust and confidence that the entire logistics system will sense and respond to

anticipated operational demands without imposing additional burdens on the warfighter. DBL relies upon the JLCE for the seamless prediction of demand, requisition of supplies, accuracy of receipt, and visibility into the status of order and delivery. DBL is characterized by sound doctrine, coherent and workable information technology architectures, commercial off the shelf solutions, refined distribution process and sub-processes, and leaders and soldiers trained to understand and apply battle-tested tactics, techniques, and procedures. Simply stated, sustainers will be "connected" at every level. They will be trained and able to execute DBL jointly—at the strategic, operational, and tactical levels. Sustainers will be capable of expanding the operational limits of the campaign in ways not envisioned in past wars and operations. Enabled by modular system designs, prognostics and diagnostics embedded in Future Combat Systems, technologies resident in the Future Tactical Truck System, Smart Distribution, intelligent load handling systems, two-level maintenance, mission-tailored configured loads, and fixed-, rotary, and parafoil-wing integrated logistics aerial resupply systems, DBL is able to provide the warfighting commanders with a reliable sustainment system more agile and flexible than ever before.

Distribution Based Logistics is further enabled by the formation of flexible, adaptable logistics command organizations at the strategic and operational Levels. A Joint U.S. Global Support Command and Unit of Employment level sustainment organizations, enabled by the JLCE, command and control Joint and Army transportation and distribution assets to achieve effects based logistics. Redundancy of materiel and movement management at different echelons is eliminated through effective use of the JLCE and its embedded decision support tools. These organizations move the distribution system closer to achieving a true sense and respond sustainment system.

Performance Based Logistics is a holistic strategy for weapons system life cycle support that focuses on the procurement of an operational capability as an integrated, affordable performance package by demanding systems provide long-term performance by establishment of clear lines of responsibility and accountability with the PBL provider for meeting previously specified warfighter performance requirements. A radical change in the acquisition and sustainment processes, PBL providers are interested parties in the mission performance and reliability of their products and provides both the commercial and organic sectors with incentives to meet performance parameters over the life of the systems instead of simply designing and selling products built to design specifications based upon rapidly outdated technologies. Consideration of long-term sustainment of systems over their entire life cycles instead of their one-time procurement costs enables a far more accurate assessment of cost-benefit and is a more realistic measure of the value of a promised capability. PBL has also brought the warfighter into systems design and development as an equal partner to ensure supportability (including availability, reliability, and maintainability) is considered as a key performance parameter throughout product fielding to ensure it is accorded due weight and consideration in cost and performance tradeoffs. The result is a system more responsive to warfighter capability needs and sustainable at significantly less cost and logistics burden over time.

Performance Based Logistics has changed the supporting sustainment force structure. Selected systems receive varying degrees of support from contractors and/or Department of the Army civilians who may be called forward by the maneuver commander as a part of the system's PBL concept. These non-combatants are transparent or minimally apparent to the maneuver commander and eliminate the requirement for selected Army sustainment structure as the PBL provider takes an active role in ensuring that the systems they produce and/or sustain are meeting operational requirements.

Demand Reduction and optimization of the sustainment footprint is the result of the confluence of the other three concepts and the impact of technological innovations. Demand reduction is facilitated by use of the JLCE to ensure that only what the maneuver commander needs is brought into the battlespace; DBL reduces the sustainment force structure in the battle space and consequently the demands on the system; and PBL facilitates the procurement of systems that consume less, made possible by advances in Science and Technology, and the use of innovative organizational design such as smaller, more modular units.

The vastly improved access to timely and accurate information provided by the JLCE in combination with the precise, reliable, and assured delivery of appropriate DBL-provides sustainment supplies and the significantly reduces maintenance time, effort, and support demands of PBL-designed systems. This enables the warfighter to operate with confidence and trust in his logisticians enabling a smaller deployed logistics footprint unencumbering the fighting forces of all but the essential mission stocks. Decreases in sustainment stocks are made possible with the adequate resourcing of essential enablers designed to reduce consumption or improve performance, like hybrid electric power, on-board water generation, embedded diagnostics and prognostics, modular rapidly replaceable components, and commonality of components. The reduction in sustainment stocks coupled with the new logistics management processes has reduced the personnel requirements and further reduced the sustainment footprint.

The redesign of sustainment organizations at all levels into more modular, tailorable capabilities based packages, has allowed commanders to deploy only what is required to support each operation. This has eliminated redundant sustainment capacity and further decreased the deployed footprint while decreasing the demand for consumables. These sustainment organizations are composed of soldiers who are warfighters first and logisticians second. This warfighter ethos coupled with sustainment platforms that have increased C4ISR, lethality and survivability such as the Future Tactical Truck System (FTTS), have greatly diminished the requirements for combat troops to protect sustainment assets. Enabled by advanced C4ISR and embedded training capabilities, logistics soldiers are fully integrated into all levels of UA/UE live, virtual and constructive training, allowing maneuver commanders to achieve the train, alert, deploy paradigm.

The Army's Sustainment Transformation continues to be an integral and essential component of The Army's Transformation to the Future Force. Organized, trained, and equipped as a full spectrum force, Future Force units are inherently more sustainable than the Current Force. Enabled by the integrated concepts of Joint Logistics Corporate Enterprise, Distribution Based Logistics, Performance Based Logistics, and Demand Reduction – and embracing a Joint Expeditionary mindset --, Army Sustainment Transformation has enhanced strategic mobility and deployability; reduced the deployed sustainment footprint, and reduced the cost of logistics while increasing warfighting capability and readiness for The Future Force.